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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/858,476 | 05/17/2001 | Hiromu Kikawa | H6810.0018/P018 | 2984 |

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| EXAMINER |
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DICKENS, CHARLENE

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| ART UNIT | PAPER NUMBER |
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2855

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | | | |
|-----------------|------------|----------------|--------|
| Application No. | 09/858,474 | Applicant(s) | Kikawa |
| Examiner | Dickens | Group Art Unit | 2855 |

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- Responsive to communication(s) filed on 5-17-01 / 7-15-02
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- Claim(s) 1 - 34 is/are pending in the application.
- Of the above claim(s) 13 - 22 is/are withdrawn from consideration.
- Claim(s) _____ is/are allowed.
- Claim(s) 1 - 12 & 23 - 34 is/are rejected.
- Claim(s) _____ is/are objected to.
- Claim(s) _____ are subject to restriction or election requirement

Application Papers

- The proposed drawing correction, filed on _____ is approved disapproved.
- The drawing(s) filed on 5/17/01 is/are objected to by the Examiner
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- All Some* None of the:
- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received
in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). 3 Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892 Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948 Other _____

Office Action Summary

1. Receipt is acknowledged of the 5/17/01 preliminary amendment, which papers have been placed of record in the file.
2. Applicant's election with traverse of Group I in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the entire application can be searched and examined on the merits without serious burden, even though there are claims to an independent or distinct invention. This is not found persuasive because a search of an air flow measuring device, classified in 73/202 would not encompass a search for an engine classified in 123/2. Further, a search for an engine classified in 123/2 would not encompass a search for an air flow measuring device, classified in 73/202. The requirement is still deemed proper and is therefore made FINAL. Hence, claims 13-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.
3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second and third air vents must be shown or the feature(s) canceled from the claim(s). No new

matter should be entered. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "8". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The abstract of the disclosure is objected to because on line 2, "a" (2nd and 3rd occurrences) should be --an--. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informalities: throughout the specification applicants recite "show in Figs", applicants are requested to specifically state what figure illustrates what, i.e, "shown in Figs. 1, 2). Appropriate correction is required.

8. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

9. Claims are objected to because of the following informalities: the applicants do not use the proper articles "a"

or "an"; in claim 3, line 2, --,-- should be placed after "element". Appropriate correction is required.

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 4-6, 12, 26-28 and 34 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original detailed written description does not disclose second and third air vents. Nevertheless, the applicants are claiming such vents in combination with other recited limitations.

12. Claims 4-6, 12, 26-28 and 34 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The original detailed written description does not disclose how to make or use second and third air vents. Nevertheless, the

applicants are claiming such vents in combination with other recited limitations.

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 4-6, 11, 12, 26-28, 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 4, 12, 26 and 34, it is not clear what element(s) constitutes the second and third air vents. Also, in these claims, the recitations to second and third air vents implies there is a first air vent. However, there is no recitation of a first air vent. In claim 6, it is not clear what structure is referred to by the "1:10" recitation. In claim 11, it is not clear what and where is the outer wall.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-8, 10-12, 23-30, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-248505 (JP '505) in view of Thurston et al. As best understood, JP '505 discloses an air flow measuring device comprising: a sub-passage 20 with a inlet and a outlet, having a opening face in a plane parallel to said air flow into said inlet, said sub-passage having a predefined curvature with a maximum downstream point and an outer wall; and a flow measuring element 30 located in said sub-passage at a position at least further downstream from said point; two absorbing material 50, which take in contaminants like that of an air vent, located upstream and downstream from said flow measuring element. JP '505 does not specifically disclose absorbing material having a height of about 1 mm and wherein the air vent has an opening surface area ratio of less than about 1:10 compared to a sectional surface area of said sub-passage; a housing; multiple air vents; the sub-passage having an outer inclined wall having a predefined groove; and an electronic circuit. JP '505 does not specifically disclose absorbing material having a height of about 1 mm and wherein the air vent has an opening surface area ratio of less than about 1:10 compared to a sectional surface area of the sub-passage. These limitations serve the purpose of providing a sub-passage capable of separating out contaminants. JP '505 does not provide any dimensions. However, where the general

conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experiment. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136. In the instant case JP '505 discloses the claimed apparatus and would thus experience the separating out of contaminants within a flow stream. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have performed routine experimentation to arrive with absorbing material having a height of about 1 mm and wherein the air vent has an opening surface area ratio of less than about 1:10 compared to a sectional surface area of the sub-passage in JP '505 for the purpose of providing a sub-passage capable of separating out contaminants. Next, Thurston et al. discloses a housing 12; specific mentions of multiple air vents 66; the sub-passage having an outer inclined wall having a predefined groove; and signal lines 86 are obviously connected and an electronic circuit for the purpose of providing a volumetric flowmeter that utilizes a venturi nozzle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a housing; multiple air vents; the sub-passage having an outer inclined wall having a predefined groove; and an

electronic circuit in the modified JP '505 as taught by Thurston et al. for the purpose of providing a volumetric flowmeter that utilizes a venturi nozzle.

16. Claims 9 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified JP '505 as applied to claims 1 and 23 above, and further in view of WO 99/53274. Claims differ from the modified JP '505 with the recitation of a device located in an air intake passage of an internal combustion engine. WO 99/53274 discloses a device located in an air intake passage of an internal combustion engine (Abstract) for the purpose of measuring the induction air mass of an internal combustion engine. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a device located in an air intake passage of an internal combustion engine in the modified JP '505 as taught by WO 99/53274 for the purpose of measuring the induction air mass of an internal combustion engine.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dickens whose telephone number is (703) 305-7047.


cd/dickens
September 29, 2002


William Oen
Primary Examiner